



MAY 21, 2002

HYSEQ, INC.  
PETRINA HSI  
670 ALMANOR AVENUE  
SUNNYVALE, CA 94085

PTAS

MAY 29 2002

Chief Information Officer  
Washington, DC 20231  
www.uspto.gov



\*102036393A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/18/2002

REEL/FRAME: 012716/0954

NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

HYSEQ, INC.

DOC DATE: 03/05/2002

ASSIGNEE:

CALLIDA GENOMICS, INC.

670 ALMANOR AVENUE

SUNNYVALE, CALIFORNIA 94085

SERIAL NUMBER: 09067317

FILING DATE: 04/27/1998

PATENT NUMBER: 6355419

ISSUE DATE: 03/12/2002

PAULA MCCRAY, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

3-29-2002



102036393

SHEET

U.S. Department of Commerce

Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof:

<p>1. Name of conveying party(ies):</p> <p>HYSEQ, INC. <span style="font-size: 1.5em; margin-left: 20px;">3-18-02</span>          670 Almanor Avenue          Sunnyvale, CA 94085</p> <p> <input type="checkbox"/> Individual                      <input type="checkbox"/> Association  <input type="checkbox"/> General Partnership        <input type="checkbox"/> Limited Partnership  <input checked="" type="checkbox"/> Corporation, State of <u>Nevada</u> </p> <p>Additional name(s) of conveying party(ies) attached?  <input type="checkbox"/> Yes                      <input checked="" type="checkbox"/> No       </p>	<p>2. Name and address of receiving party(ies):</p> <p>Name: <u>CALLIDA GENOMICS, INC.</u>          Address: <u>670 Almanor Avenue</u>  <u>Sunnyvale, CA 94085</u></p> <p> <input type="checkbox"/> Individual                      <input type="checkbox"/> Association  <input type="checkbox"/> General Partnership        <input type="checkbox"/> Limited Partnership  <input checked="" type="checkbox"/> Corporation, State of <u>Delaware</u> </p> <p>Additional name(s) of receiving party(ies) attached?  <input type="checkbox"/> Yes                      <input checked="" type="checkbox"/> No       </p>
<p>3. Nature of Conveyance:</p> <p> <input checked="" type="checkbox"/> Assignment                      <input type="checkbox"/> Merger  <input type="checkbox"/> Security Agreement           <input type="checkbox"/> Change of Name         </p> <p>Other: _____</p> <p>Execution Date: March 5, 2002</p>	
<p>4. Application Number(s) or Patent Number(s):</p> <p>A. Patent Application Number(s): <u>09/067,317</u></p> <p>Title: <u>Preparation of Pools of Nucleic Acids Based on Representation in the Sample</u></p> <p>Filed: <u>April 27, 1998</u></p> <p>Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>B. Patent Number(s):</p> <p>Title: _____          Filed: _____</p> <p>Additional numbers attached? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>5. Name and address of party to whom correspondence concerning this document should be mailed:</p> <p>Name: <u>Petrina Hsi</u> Reg. No. <u>38,496</u>          Address: <u>Hyseq, Inc.</u>  <u>670 Almanor Avenue</u>  <u>Sunnyvale, CA 94085</u></p>	<p>6. Total number of applications and patents involved: <u>1</u></p> <p>7. Total fee (37 C.F.R. § 3.41) (\$40.00 per assignment): <u>\$40.00</u></p> <p> <input type="checkbox"/> Enclosed  <input checked="" type="checkbox"/> Authorized to be charged to deposit account.  <input checked="" type="checkbox"/> The Commissioner is authorized to charge underpayment of any fees or credit any overpayment to deposit Account Number 501169.         </p> <p>8. Deposit Account Number: <u>501169</u></p>
<p>DO NOT USE THIS SPACE</p>	
<p>9. Statement and signature.</p> <p>To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.</p> <p> <u>Petrina Hsi, 38,496</u>                      <u>Petrina Hsi</u>                      <u>March 5, 2002</u>          Name, Registration Number                      Signature                      Date       </p> <p>Total number of pages including cover sheet, attachments and document: <u>3</u></p>	
<p>Mail documents to be recorded with required cover sheet information to:      BOX ASSIGNMENTS          Commissioner of Patents and Trademarks          Washington, D.C. 20231</p>	

OFFICE OF PUBLIC RECORDS

2002 MAR 18 PM 2:18  
FINANCE SECTION

03/28/2002 AAHMD1 00000072 501169 09067317  
 01 FC:581 40.00 CH

## ASSIGNMENT

WHEREAS, Hyseq, Inc., ASSIGNOR, a corporation organized and existing under the laws of the State of Nevada, United States of America, and having a place of business at 670 Almanor Avenue, Sunnyvale, California 94085, is the owner of the entire right, title and interest in, and to the United States Patent Application Serial No. 09/067,317, filed 04/27/1998, entitled, "Preparation of Pools of Nucleic Acids Based on Representation in the Sample", and of the inventions therein described; and

WHEREAS, Callida Genomics, Inc., ASSIGNEE, a corporation organized and existing under the laws of the State of Delaware, United States of America, and having a place of business at 670 Almanor Ave., Sunnyvale, California 94085, is desirous of obtaining the entire right, title and interest in, to and under such patents and such inventions.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to ASSIGNOR in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR, as of October 24, 2001, has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the inventions described in the Patent Application, including the right to sue for past infringement, and the patent and all divisions, renewals and continuations and continuation-in-parts thereof, and all patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which were or may hereafter be filed for the invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from the patent under the patent laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and

ASSIGNOR HEREBY authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument; and

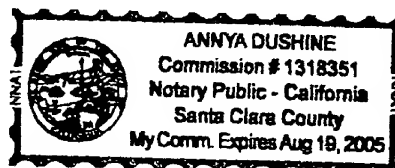
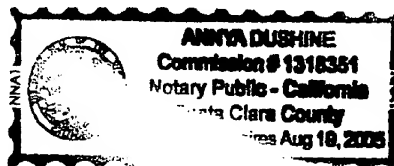
ASSIGNOR HEREBY covenants and agrees that it has the full right to convey the entire interest herein assigned, and that ASSIGNOR has not executed, and will not execute, any agreement in conflict herewith; and

ASSIGNOR HEREBY further covenants and agrees upon the written request and at the expense ASSIGNEE, its successors, legal representatives and assigns that ASSIGNOR will

IN WITNESS AND IN TESTIMONY WHEREOF, I, as a duly authorized representative of ASSIGNOR, hereunto set my hand and seal this 5<sup>th</sup> day of March, 2002.

State of California )  
County of Santa Clara ) SS.:

Notary Public





UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

JUNE 21, 2000

PTAS

MARSHALL, O'TOOLE, GERSTEIN, ET AL  
JOSEPH A. WILLIAMS, JR.  
6300 SEARS TOWER  
233 SOUTH WACKER DRIVE  
CHICAGO, IL 60606-6402



\*101332868A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
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RECORDATION DATE: 03/27/2000

REEL/FRAME: 010716/0409  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

DRMANAC, RADOJE

DOC DATE: 01/14/2000

ASSIGNOR:

DRMANAC, SNEZANA

DOC DATE: 01/14/2000

ASSIGNOR:

KITA, DAVID

DOC DATE: 01/24/2000

ASSIGNOR:

COOKE, CORY

DOC DATE: 02/24/2000

ASSIGNOR:

XU, CHONGJUN

DOC DATE: 01/14/2000

ASSIGNEE:

HYSEQ, INC., A NEVADA CORPORATION  
670 ALMANOR AVENUE  
SUNNYVALE, CALIFORNIA 94086

PATENTS ONLY

04-25-2000

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ginal

101332868

1. Name of party or parties conveying an interest:

Radoje Drmanac  
Snezana Drmanac  
David Kita  
Cory Cooke  
Chongjun Xu

2. Name and address of party or parties receiving an interest:

Name: Hyseq, Inc., a Nevada corporation  
Address: 670 Almanor Avenue  
City: Sunnyvale  
State: California  
Zip: 94086

3. Description of the interest conveyed:

☒ Assignment

☐ Merger

☐ Change of Name

☐ Security Agreement

Other:

Execution Dates: January 14, 2000,  
January 24, 2000, & February 24, 2000.

4. Application number(s) or patent number(s). Additional sheet attached?

YES ☐ NO ☒

If the document is being filed together with a new application, the execution date of the application is:

A. Patent application no.(s): 09/479,608  
filed January 6, 2000

B. Patent no.(s):

5. Name and address of party to whom correspondence concerning this cover sheet should be mailed:

Name: Joseph A. Williams, Jr.  
Reg. No. 38,659  
MARSHALL, O'TOOLE, GERSTEIN,  
MURRAY & BORUN  
Street Address: 6300 Sears Tower,  
233 South Wacker Drive  
City: Chicago  
State: Illinois  
Zip: 60606-6402

6. Number of applications and/or patents identified on this cover sheet:

1

7. Amount of fee enclosed or authorized to be charged:  
\$ 40.00

8. Any additional required fee may be charged, or any overpayment credited to our deposit account: 13-2855

9. To the best of my knowledge and belief, the information contained on this cover sheet is true and correct and any copy submitted is a true copy of the original document.

Date: 3-22-00

04/24/2000 DCOATED 00000378 09479608

01 FC:531

Joseph A. Williams, Jr.

Reg. No. 38,659

Total number of pages including cover sheet, attachments, and document: 4

## A S S I G N M E N T

Serial No: 09/479,608  
Filed: January 6, 2000  
Title: ENHANCED SEQUENCING BY HYBRIDIZATION USING POOLS OF PROBES

For \$10.00 (Ten Dollars), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned hereby assign to Hyseq, Inc., a Nevada corporation, 670 Almanor Avenue, Sunnyvale, California 94086, (hereinafter "assignee"), its successors and assigns, the entire right, title and interest in the invention or improvements of the undersigned disclosed in the above-identified application for Letters Patent of the United States and in said application and any and all other applications, both United States and foreign, which the undersigned may file, either solely or jointly with others, on said invention or improvements, and in any and all Letters Patent of the United States and foreign countries, which may be obtained on any of said applications, and in any reissue or extension thereof.

The undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to said assignee.

The undersigned warrants himself to be the owner of the interest herein assigned and to have the right to make this assignment and further warrants that there are no outstanding prior assignments, licenses, or other rights in the interest herein assigned.

For said consideration the undersigned hereby agrees, upon the request and at the expense of said assignee, its successors and assigns, to execute any and all divisional, continuation, continuation-in-part and substitute applications for said invention or improvements, and any necessary oath or affidavit relating thereto, and any application for the reissue or extension of any Letters Patent that may be granted upon said application, and any and all applications and other documents for Letters Patent in foreign countries on said invention or improvements, that said assignee, its successors or assigns, may deem necessary or expedient, and for said consideration the undersigned further agrees upon the request of said assignee, its successors or assigns, in the event of any application or Letters Patent assigned herein becoming involved in Interference, to cooperate to the best of the ability of the undersigned with said assignee, its successors or assigns, in the matters of preparing and executing the preliminary statement and giving and producing evidence in support thereof, the undersigned hereby agreeing to perform, upon request, any and all affirmative acts to obtain said Letters Patent, both United States and foreign, and vest all rights therein hereby conveyed in said assignee, its successors and assigns, whereby said Letters Patent will be held and enjoyed by said assignee, its successors and assigns, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment and sale had not been made.

MARSHALL, O'TOOLE, GERSTEIN, MURRAY & BORUN, 6300 Sears Tower, 233 S uth Wacker Drive, Chicago, Illinois 60606-6402

WITNESS my hand this 14 day of January, Two Thousand.

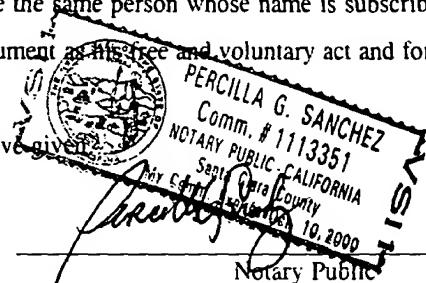
State of California  
County of Santa Clara } ss.

Radoje Drmanac  
Radoje Drmanac

On this 14<sup>th</sup> day of Jan., 2000, before me, a Notary Public in and for the County and State aforesaid, appeared Radoje Drmanac, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the same day and year last above given.

My Commission Expires: Oct. 10, 2000



WITNESS my hand this 14 day of January, Two Thousand.

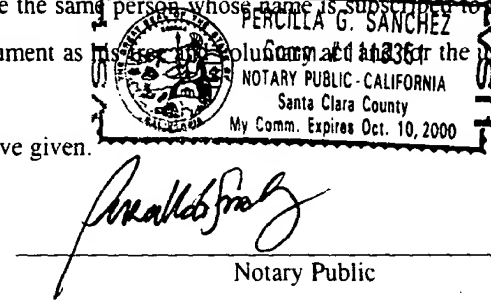
State of California  
County of Santa Clara } ss.

Snezana Drmanac  
Snezana Drmanac

On this 14<sup>th</sup> day of Jan., 2000, before me, a Notary Public in and for the County and State aforesaid, appeared Snezana Drmanac, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the same day and year last above given.

My Commission Expires: Oct. 10, 2000



WITNESS my hand this 24<sup>th</sup> day of January, Two Thousand.

State of California  
County of San Mateo } ss.

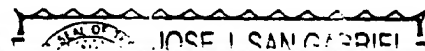
David Kita  
David Kita

On this 24<sup>th</sup> day of January, 2000, before me, a Notary Public in and for the County and State aforesaid, appeared David Kita, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the same day and year last above given.

My Commission Expires: July 28, 2003

Jose I. San Gabriel  
Notary Public



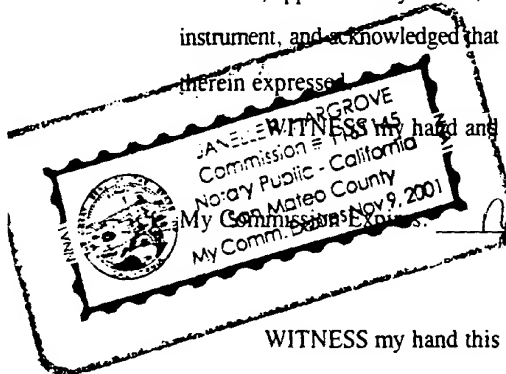


WITNESS my hand this 24th day of February, Two Thousand.

State of California  
County of San Mateo } ss.

Cory Cooke  
Cory Cooke

On this 24th day of February, 2000, before me, a Notary Public in and for the County and State aforesaid, appeared Cory Cooke, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.



WITNESS my hand and seal the same day and year last above given.

November 9, 2001

Janelle W. Argrove  
Notary Public

WITNESS my hand this 14th day of January, Two Thousand.

State of California  
County of Santa Clara } ss.

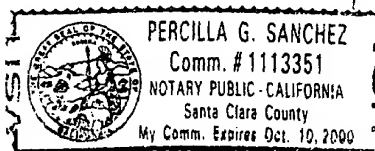
Chongjun Xu  
Chongjun Xu

On this 14th day of Jan., 2000, before me, a Notary Public in and for the County and State aforesaid, appeared Chongjun Xu, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the same day and year last above given.

My Commission Expires: Oct. 10, 2000

Percilla G. Sanchez  
Notary Public



35918

Attorney: PSH/ad Date Mailed: March 5, 2002

*The Following Has Been Received In The U.S. Patent and Trademark Office On The Date Stamped Hereon:*

- 1) Recordation cover sheet (3 pages) (Original + Duplicate)
- 2) Assignment (4 pages)
- 3) Return Postcard

# RECORDATION FORM COVER SHEET PATENTS ONLY

U.S. Department of Commerce  
Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof:

<p>1. Name of conveying party(ies):</p> <p>HYSEQ, INC. 670 Almanor Avenue Sunnyvale, CA 94085</p> <p> <input type="checkbox"/> Individual                      <input type="checkbox"/> Association  <input type="checkbox"/> General Partnership           <input type="checkbox"/> Limited Partnership  <input checked="" type="checkbox"/> Corporation, State of <u>Nevada</u> </p> <p>Additional name(s) of conveying party(ies) attached?  <input type="checkbox"/> Yes                      <input checked="" type="checkbox"/> No         </p>	<p>2. Name and address of receiving party(ies):</p> <p>Name: <u>CALLIDA GENOMICS, INC.</u>            Address: <u>670 Almanor Avenue</u>  <u>Sunnyvale, CA 94085</u></p> <p> <input type="checkbox"/> Individual                      <input type="checkbox"/> Association  <input type="checkbox"/> General Partnership           <input type="checkbox"/> Limited Partnership  <input checked="" type="checkbox"/> Corporation, State of <u>Delaware</u> </p> <p>Additional name(s) of receiving party(ies) attached?  <input type="checkbox"/> Yes                      <input checked="" type="checkbox"/> No         </p>
<p>3. Nature of Conveyance:</p> <p> <input checked="" type="checkbox"/> Assignment                      <input type="checkbox"/> Merger  <input type="checkbox"/> Security Agreement           <input type="checkbox"/> Change of Name         </p> <p>Other: _____</p> <p>Execution Date: March 5, 2002</p>	
<p>4. Application Number(s) or Patent Number(s):</p> <p>A. Patent Application Number(s): 60/115,284</p> <p>Title: Enhanced Sequencing by Hybridization Using Informative Pools of Probes</p> <p>Filed: January 06, 1999</p> <p>Additional numbers attached? <input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p>	<p>B. Patent Number(s): 6,270,961</p> <p>Title: Method and Apparatus for DNA Sequencing DNA Identification</p> <p>Filed: December 09, 1994</p> <p>Additional numbers attached? <input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p>
<p>5. Name and address of party to whom correspondence concerning this document should be mailed:</p> <p>Name: <u>Petrina Hsi</u>    Reg. No. <u>38,496</u>            Address: <u>Hyseq, Inc.</u>  <u>670 Almanor Avenue</u>  <u>Sunnyvale, CA 94085</u></p>	<p>6. Total number of applications and patents involved: <u>24</u></p> <p>7. Total fee (37 C.F.R. § 3.41)(\$40.00 per assignment): <u>\$960.00</u></p> <p> <input type="checkbox"/> Enclosed  <input checked="" type="checkbox"/> Authorized to be charged to deposit account.  <input checked="" type="checkbox"/> The Commissioner is authorized to charge underpayment of any fees or credit any overpayment to deposit Account Number 501169.         </p> <p>8. Deposit Account Number: <u>501169</u></p>
DO NOT USE THIS SPACE	
<p>9. Statement and signature.</p> <p>To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="width: 30%;"> <p><u>Petrina Hsi, 38,496</u> Name, Registration Number</p> </div> <div style="width: 30%; text-align: center;"> <p><u>Petrina Hsi</u> Signature</p> </div> <div style="width: 30%; text-align: right;"> <p><u>March 5, 2002</u> Date</p> </div> </div> <p style="text-align: right; margin-top: 10px;">Total number of pages including cover sheet, attachments and document: <u>7</u></p>	
<p>Mail documents to be recorded with required cover sheet information to:</p> <p style="text-align: right;">BOX ASSIGNMENTS Commissioner of Patents and Trademarks Washington, D.C. 20231</p>	

CONTINUATION TO 4A

SERIAL NUMBER	TITLE	FILING DATE
09/479,608	Enhanced Sequencing by Hybridization Using Pools of Probes	01/16/2000
60/111,961	Improved Polynucleotide Arrays and Methods of Making and Using the Same	12/11/1998
09/251,305	Linear Arrays of Immobilized Compounds and Methods of Using Same	02/17/1999
08/097,173	Method for Screening for Unknown Organisms	07/23/1993
07/576,559	Methods of Sequencing Genomes by Hybridization of Oligonucleotide Probes	08/31/1990
07/175,088	Method of Sequencing of Genomes by Hybridization of Oligonucleotide Probes	03/30/1988
08/892,503	Methods and Compositions for Detection or Quantification of Nucleic Acid Species	07/14/1997
08/912,885	Methods and Compositions for Detection or Quantification of Nucleic Acid Species	08/15/1997
08/947,779	Methods and Compositions for Detection or Quantification of Nucleic Acid Species	10/09/1997
08/959,365	Methods and Compositions for Detection or Quantification of Nucleic Acid Species	10/28/1997
07/186,053	Nucleic Acid Sequence Determination By Multiple Mixed Nucleotide Probes	04/25/1988
09/083,861	Nucleic Acid Detection Method Employing Oligonucleotide Probes Affixed to Particles and Related Compositions	05/21/1998
09/085,529	Nucleic Acid Detection Method Employing Sandwich Arrays and Related Compositions	05/27/1998
09/277,383	Solution-Based Methods and Materials for Sequence Analysis by Hybridization	03/25/1999
09/536,217	Solution-Based Methods and Materials for Sequence Analysis by Hybridization	03/27/2000
60/111,761	Substrate Holder for Sandwich Array	12/11/1998

CONTINUATION TO 4B

PATENT NUMBER	TITLE	FILING DATE
6,309,824	Methods and Compositions for Detection or Quantification of Nucleic Acid Species	01/16/1997
6,297,006	Methods and Compositions for Detection or Quantification of Nucleic Acid Species	03/04/1997
5,002,867	Nucleic Acid Sequence Determination by Multiple Mixed Oligonucleotide Probes	10/24/1988
6,245,518	Polynucleotide Arrays and Methods of Making and Using the Same	12/06/1999
5,882,930	Reagent Transfer Device	11/10/1997
6,268,210	Sandwich Arrays and Methods of Making and Using the Same	02/17/1999

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Patent and Trademark Office

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3. Nature of Conveyance:

☒ Assignment      ☐ Merger  
☐ Security Agreement      ☐ Change of Name

Other: \_\_\_\_\_

Execution Date: March 5, 2002

<p>4. Application Number(s) or Patent Number(s):</p> <p>A. Patent Application Number(s): 60/115,284</p> <p>Title: Enhanced Sequencing by Hybridization Using Informative Pools of Probes</p> <p>Filed: January 06, 1999</p> <p>Additional numbers attached? <input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No</p>	<p>B. Patent Number(s): 6,270,961</p> <p>Title: Method and Apparatus for DNA Sequencing DNA Identification</p> <p>Filed: December 09, 1994</p> <p>Additional numbers attached? <input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No</p>
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<p>5. Name and address of party to whom correspondence concerning this document should be mailed:</p> <p>Name: <u>Petrina Hsi</u> Reg. No. <u>38,496</u>            Address: <u>Hyseq, Inc.</u>  <u>670 Almanor Avenue</u>  <u>Sunnyvale, CA 94085</u></p>	<p>6. Total number of applications and patents involved: <u>24</u></p> <p>7. Total fee (37 C.F.R. § 3.41)(\$40.00 per assignment): <u>\$960.00</u></p> <p> <input type="checkbox"/> Enclosed  <input checked="" type="checkbox"/> Authorized to be charged to deposit account.  <input checked="" type="checkbox"/> The Commissioner is authorized to charge underpayment of any fees or credit any overpayment to deposit Account Number 501169.         </p> <p>8. Deposit Account Number: <u>501169</u></p>
--	--

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Petrina Hsi, 38,496      Petrina Hsi      March 5, 2002  
 Name, Registration Number      Signature      Date

Total number of pages including cover sheet, attachments and document: 7

Mail documents to be recorded with required cover sheet information to: BOX ASSIGNMENTS  
Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**CONTINUATION TO 4A**

<b>SERIAL NUMBER</b>	<b>TITLE</b>	<b>FILING DATE</b>
09/479,608	Enhanced Sequencing by Hybridization Using Pools of Probes	01/16/2000
60/111,961	Improved Polynucleotide Arrays and Methods of Making and Using the Same	12/11/1998
09/251,305	Linear Arrays of Immobilized Compounds and Methods of Using Same	02/17/1999
08/097,173	Method for Screening for Unknown Organisms	07/23/1993
07/576,559	Methods of Sequencing Genomes by Hybridization of Oligonucleotide Probes	08/31/1990
07/175,088	Method of Sequencing of Genomes by Hybridization of Oligonucleotide Probes	03/30/1988
08/892,503	Methods and Compositions for Detection or Quantification of Nucleic Acid Species	07/14/1997
08/912,885	Methods and Compositions for Detection or Quantification of Nucleic Acid Species	08/15/1997
08/947,779	Methods and Compositions for Detection or Quantification of Nucleic Acid Species	10/09/1997
08/959,365	Methods and Compositions for Detection or Quantification of Nucleic Acid Species	10/28/1997
07/186,053	Nucleic Acid Sequence Determination By Multiple Mixed Nucleotide Probes	04/25/1988
09/083,861	Nucleic Acid Detection Method Employing Oligonucleotide Probes Affixed to Particles and Related Compositions	05/21/1998
09/085,529	Nucleic Acid Detection Method Employing Sandwich Arrays and Related Compositions	05/27/1998
09/277,383	Solution-Based Methods and Materials for Sequence Analysis by Hybridization	03/25/1999
09/536,217	Solution-Based Methods and Materials for Sequence Analysis by Hybridization	03/27/2000
60/111,761	Substrate Holder for Sandwich Array	12/11/1998

**CONTINUATION TO 4B**

<b>PATENT NUMBER</b>	<b>TITLE</b>	<b>FILING DATE</b>
6,309,824	Methods and Compositions for Detection or Quantification of Nucleic Acid Species	01/16/1997
6,297,006	Methods and Compositions for Detection or Quantification of Nucleic Acid Species	03/04/1997
5,002,867	Nucleic Acid Sequence Determination by Multiple Mixed Oligonucleotide Probes	10/24/1988
6,245,518	Polynucleotide Arrays and Methods of Making and Using the Same	12/06/1999
5,882,930	Reagent Transfer Device	11/10/1997
6,268,210	Sandwich Arrays and Methods of Making and Using the Same	02/17/1999



## ASSIGNMENT

WHEREAS, Hyseq, Inc., ASSIGNOR, a corporation organized and existing under the laws of the State of Nevada, United States of America, and having a place of business at 670 Almanor Avenue, Sunnyvale, California 94085, is the owner of the entire right, title and interest in, and to the United States Letters Patents and Patent Applications set forth in Exhibit A and of the inventions therein described; and

WHEREAS, Callida Genomics, Inc., ASSIGNEE, a corporation organized and existing under the laws of the State of Delaware, United States of America, and having a place of business at 670 Almanor Ave., Sunnyvale, California 94085, is desirous of obtaining the entire right, title and interest in, to and under such patents and such inventions.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to ASSIGNOR in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR, as of October 24, 2001, has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the inventions described in the Letters Patents and Patent Applications set forth in Exhibit A, including the right to sue for past infringement, and the patent and all divisions, renewals and continuations and continuation-in-parts thereof, and all patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which were or may hereafter be filed for the invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from the patent under the patent laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and

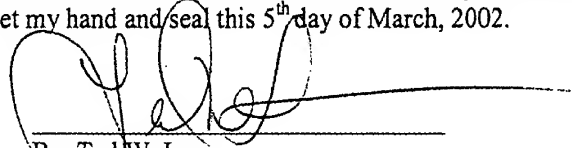
ASSIGNOR HEREBY authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument; and

ASSIGNOR HEREBY covenants and agrees that it has the full right to convey the entire interest herein assigned, and that ASSIGNOR has not executed, and will not execute, any agreement in conflict herewith; and

ASSIGNOR HEREBY further covenants and agrees upon the written request and at the expense ASSIGNEE, its successors, legal representatives and assigns that ASSIGNOR will

communicate to ASSIGNEE, its successors, legal representatives and assigns, any material facts known to ASSIGNOR respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally to cooperate to the best ability of the undersigned to aid ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for the invention in all countries.

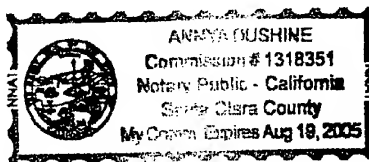
IN WITNESS AND IN TESTIMONY WHEREOF, I, as a duly authorized representative of ASSIGNOR, hereunto set my hand and seal this 5<sup>th</sup> day of March, 2002.

  
By: Ted W. Love  
President and CEO

State of California )  
County of Santa Clara ) SS.:

On this 5<sup>th</sup> day of March, 2002, before me, a Notary Public in and for the State and County aforesaid, personally appeared TED LOVE, to me known and known to me to be the person of that name, who signed and sealed the foregoing instrument, and he acknowledged the same to be his free act and deed.

  
Notary Public.



**EXHIBIT A**

<b>TITLE</b>	<b>SERIAL NUMBER</b>	<b>STATUS</b>
Enhanced Sequencing by Hybridization Using Informative Pools of Probes	60/115,284	Expired
Enhanced Sequencing by Hybridization Using Pools of Probes	09/479,608	
Improved Polynucleotide Arrays and Methods of Making and Using the Same	60/111,961	Expired
Linear Arrays of Immobilized Compounds and Methods of Using Same	09/251,305	
Method and Apparatus for DNA Sequencing DNA Identification	08/353,554	6,270,961
Method for Screening for Unknown Organisms	08/097,173	Abandoned
Methods of Sequencing Genomes by Hybridization of Oligonucleotide Probes	07/576,559	Abandoned
Method of Sequencing of Genomes by Hybridization of Oligonucleotide Probes	07/175,088	Abandoned
Methods and Compositions for Detection or Quantification of Nucleic Acid Species	08/784,747	6,309,824
Methods and Compositions for Detection or Quantification of Nucleic Acid Species	08/812,951	6,297,006
Methods and Compositions for Detection or Quantification of Nucleic Acid Species	08/892,503	
Methods and Compositions for Detection or Quantification of Nucleic Acid Species	08/912,885	
Methods and Compositions for Detection or Quantification of Nucleic Acid Species	08/947,779	
Methods and Compositions for Detection or Quantification of Nucleic Acid Species	08/959,365	Abandoned
Nucleic Acid Sequence Determination by Multiple Mixed Oligonucleotide Probes	07/261,702	5,002,867 Disclaimed
Nucleic Acid Sequence Determination By Multiple Mixed Nucleotide Probes	07/186,053	Abandoned
Nucleic Acid Detection Method Employing Oligonucleotide Probes Affixed to Particles and Related Compositions	09/083,861	
Nucleic Acid Detection Method Employing Sandwich Arrays and Related Compositions	09/085,529	Abandoned
Polynucleotide Arrays and Methods of Making and Using the Same	09/454,822	6,245,518
Reagent Transfer Device	08/966,893	5,882,930

TITLE	SERIAL NUMBER	STATUS
Sandwich Arrays and Methods of Making and Using the Same	09/251,303	6,268,210
Solution-Based Methods and Materials for Sequence Analysis by Hybridization	09/277,383	Abandoned
Solution-Based Methods and Materials for Sequence Analysis by Hybridization	09/536,217	
Substrate Holder for Sandwich Array	60/111,761	Expired



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
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NOVEMBER 04, 1998

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THREE EMBARCADERO CENTER  
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MDB&E, LLP

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NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 08/10/1998

REEL/FRAME: 9377/0102  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

ALFENITO, MARK R.

DOC DATE: 06/24/1998

ASSIGNEE:

HYSEQ, INC.  
670 ALMANOR AVENUE  
SUNNYVALE, CALIFORNIA 94086

SERIAL NUMBER: 09067317  
PATENT NUMBER:

FILING DATE: 04/27/1998  
ISSUE DATE:

KIMBERLY WHITE, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

Docket: 20411-736-00 US  
Action: noted  
Date Due: X  
Critical Date:                       
Docketed By: RJD  
Attorney Approval:                       
Filed By:                       
MCCUTCHEN, DOYLE, BROWN & ENERSEN LLP

8-10-98

08-17-1998

10

To the Honorable Commission.		100795416		IEET U.S. Department of Commerce Patent and Trademark Office	
1. Name and address of conveying party(ies):  Name: <u>Mark R. Alfenito</u> Address: <u>327 Edgewood Road</u> <u>Redwood City, CA 94062</u>  <input checked="" type="checkbox"/> Individual <input type="checkbox"/> Association <input type="checkbox"/> General Partnership <input type="checkbox"/> Limited Partnership <input type="checkbox"/> Corporation, State of _____ <input type="checkbox"/> Other: _____  Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		2. Name and address of receiving party(ies):  Name: <u>Hyseq, Inc.</u> Address: <u>670 Almanor Avenue</u> <u>Sunnyvale, CA 94086</u>  Additional name(s) of receiving party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		3. Nature of Conveyance:  <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other: _____  Execution Date: <u>June 24</u> , 1998	
4. Application Number(s) or Patent Number(s):  A. Patent Application Number(s). <u>09/067,317</u>  Title: <u>Preparation of Pools of Nucleic Acids</u> <u>Based on Representation in a Sample</u> Filed: <u>April 27, 1998</u>  Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		B. Patent Number(s):  Title: _____ Filed: _____  Additional numbers attached? <input type="checkbox"/> Yes <input type="checkbox"/> No		5. Name and address of party to whom correspondence concerning this document should be mailed:  Name: <u>Emily M. Haliday</u>  Address: <u>Three Embarcadero Center</u> <u>San Francisco, California 94111</u>  6. Total number of applications and patents involved: <u>1</u>  7. Total fee (37 C.F.R. § 3.41)(\$40.00 per assignment): <u>\$40.00</u>  <input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> Authorized to be charged to deposit account. <input checked="" type="checkbox"/> The Commissioner is authorized to charge underpayment of any fees or credit any overpayment to deposit Account Number 13-0257.  8. Deposit Account Number: <u>13-0257</u>	
DO NOT USE THIS SPACE					
9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.  <u>Emily M. Haliday</u> Reg. No. 38,903 Name, Registration Number  <u>Emily M. Haliday</u> Signature  <u>Aug. 5, 1998</u> Date  Total number of pages including cover sheet, attachments and document: <u>3</u>					
Mail documents to be recorded with required cover sheet information to:		Commissioner of Patents and Trademarks Box Assignments Washington, D.C. 20231			

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BA982170.021  
Docket No. 20411-736

08/05/98 04:14 PM

**PATENT APPLICATION**  
**Assignment**

For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned, inventor:

Mark R. Alfenito

Who have created a certain invention for which an application for United States Letters Patent entitled PREPARATION OF POOLS OF NUCLEIC ACIDS BASED ON REPRESENTATION IN A SAMPLE was filed in the U.S. Patent and Trademark Office on April 27, 1998 and assigned Serial Number 09/067,317.

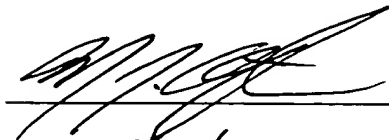
Do hereby sell, assign and transfer to Hyseq, Inc. a corporation, having a place of business at 670 Almanor Avenue, Sunnyvale, California 94086, its successors, assigns, and legal representatives, the full and exclusive right to said invention and said application and to any and all inventions described in said invention and said application and to any and all inventions described in said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possession and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, act, and treaties, including all future conventions, unions, agreements, acts, and treaties;

Agree that Hyseq, Inc., hereinafter referred to as Assignee, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, successors, assigns, or legal representatives; and

Covenant with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same has herein expressed is possessed by the undersigned.

IN THE TESTIMONY WHEREOF I have hereunto set my signature on the date indicated below.

Mark R. Alfenito

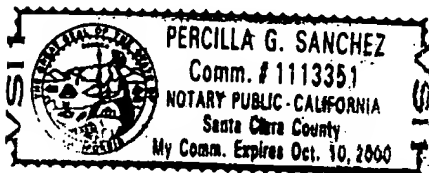
  
Date: 6/24/98

STATE OF CALIFORNIA }

COUNTY OF Santa Clara }

On June 24, 1998 before me, Percilla G. Sanchez, Notary Public,  
personally appeared Mark Alfenito  
NAME(S) OF SIGNER(S)

☒ personally known to me - OR - ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Witness my hand and official seal.

  
SIGNATURE OF NOTARY

—OPTIONAL SECTION—

**CAPACITY CLAIMED BY SIGNER**

Though statute does not require the Notary to fill in the data below, doing so may prove invaluable to persons relying on the document.

- ☐ INDIVIDUAL  
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- ☐ PARTNER(S) ☐ LIMITED  
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**SIGNER IS REPRESENTING:**

Name of Person(s) or Entity(ies)

THIS CERTIFICATE MUST BE ATTACHED TO THE DOCUMENT DESCRIBED AT RIGHT:

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Number of Pages \_\_\_\_\_ Date of Document \_\_\_\_\_

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